

centage of sterile marriages is very striking, particularly when it is the husband who is the subject of hereditary disease. Eight mothers at the time of conception and during the early months of pregnancy presented severe and indubitable signs of hereditary syphilis; their fourteen children showed no specific stigmata whatever. The author draws the conclusion that parents affected with hereditary syphilis will have none or few children, but that the latter will in all probability be healthy; nevertheless, when an individual affected with hereditary syphilis contemplates marriage it would be in order to subject him to energetic specific treatment prior to that event; if it be the prospective husband, there is absolutely no danger of the transmission of syphilis.

The Eye of the Aged.—MONAUNI (*Arch. d'ophthal.*, March, 1921, p. 180) contributes a study of the senile eye; the reporter concludes that such lesions may be reduced to the following types: Fatty and calcareous degeneration, decrease of the elastic elements and increase of hyaline substance. Fatty degeneration affects all the ocular tissues, especially the fibrous and vascular tunics as well as the refracting media; it attains its maximum in the sclera, the ciliary body and vitreous humor. Calcareous degeneration is more general in the posterior segment of the sclera, in the stroma of the ciliary body and in the vitreous, especially its anterior segment. The fats of the senile eye are, for the most part, constituted by cholesterolin; to a less degree by the neutral fats. It is only in the vitreous bodies of the choroid that phosphatic compounds, saturated and non-saturated, are met with. The alterations of the elastic fibers consist in rarefaction of the elastic meshes, narrowing of the fibers and hyaline degeneration. Rarefaction and narrowing of the fibers affect all the ocular tissues as well as the optic nerve; these changes predominate in the cornea and sclera. In the cornea the anterior and posterior limiting membranes are affected with hyaline degeneration; the same is the case with the elastic fibers of the periphery, the choroidal vitreous lamina, capsule of the lens and very probably also the zonula and the large fibers of the vitreous body; the latter constantly show numerous crystals of variable chemical composition. In the explanation of the pathogeny of the *arcus senilis*, besides fat, account must be taken of the alterations of the elastic tissue of the periphery of the cornea, and especially also of hyaline degeneration. The vitreous bodies of the choroid must be regarded as hyaline productions of the vitreous lamina combined with the fats of the subepithelial layer of the choroid; there is present, in addition, a fatty degeneration combined, in all probability, with hyaline degenerations; the same is true of the fibers of the zonula and of the large fibers of the vitreous body; to these alterations is to be attributed the greatest importance in the pathogenesis of certain forms of luxation of the lens, senile synchysis and sparkling synchysis. There is the closest dependence between the lesions of the ocular membranes and those of the bloodvessels. The lesions above mentioned explain the disorders of nutrition and the ocular maladies of senility, as also of the disturbances of accommodation. Based upon the above findings, all more or less characteristic of arteriosclerosis, the writer concludes that the alterations of the senile eye are due, above all other causes, to atheroma; the appellation *cholesteric steatosis* of the senile eye, suggested by Vollaro, is quite suitable for the syndrome.

PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF

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The Value and Mechanism of the Colloidal-gold Test.—After a comprehensive review of the colloidal-gold test, as applied to the examination of spinal fluid by Lange, CRUICKSHANK (*British Jour. Exper. Path.*, 1920, i, 71) detailed the findings of the gold sol, Wassermann and globulin in 27 cases of general paralysis, 1 of juvenile general paralysis, 3 of suspected general paralysis, 1 of taboparesis and 58 miscellaneous cases comprising different mental conditions, chronic dementia, epilepsy, dementia precox, delusional and other insanities. In the cases of general paralysis, the findings agreed with those of other observers in that all cases gave the paretic reaction, the Wassermann tests were positive and various degrees of globulin increase were detected in all instances. In the 57 cases representing various mental conditions, all gave negative Wassermann and gold reactions. As the reacting power of a syphilitic serum or spinal fluid had been shown to reside in the globulin fraction of the protein, paretic fluids were subjected to half saturated ammonium sulphate in order to get rid of albumen, dissolved in salt solution and dialyzed until free from salt. The precipitate of globulin was then dissolved in an amount of 0.8 cc of 5 per cent NaCl solution equivalent to the original volume of spinal fluid. It was found that the globulin had the precipitating power of the original spinal fluid, being even more active, and that the globulin gave positive Wassermann reactions. In 2 cases where the spinal fluid had yielded anomalous gold reactions, the separated globulin gave a paretic reaction in both instances. In this connection, it was learned by experimentation that the dialyzed albumen fraction acted as a protective colloid, which had apparently served to obscure the readings in the original fluid. The globulin from negative spinal fluids did not precipitate the colloidal gold, even in high concentrations, suggesting that the reactions of paretic fluids were not due solely to the increased content of globulin, but to an alteration in the physical or chemical character of the globulin and that the different zone reactions were dependent on the relative amounts of globulin and albumen, as suggested by Felton. The alteration in globulin cannot be regarded as specific for syphilis, since it occurs according to the work of others in multiple sclerosis, but it is interesting that the change is so constant in one and common in another, which is now suspected to be due to a spirochete, the author believing that only reaction of the paretic and luetic types should be regarded as a real diagnostic value and that meningitic reactions, while being of some value in conjunction with other findings